IMPACT OF COGNITIVE BIASES ON MANAGERIAL DECISION-MAKING STYLES IN ORGANIZATIONS

SHORT SYNOPSIS

Submitted in partial fulfillment of the requirement of the degree of

DOCTOR OF PHILOSOPHY

Manav Rachna International Institute of Research and Studies

(Deemed to be University)

by

Aayushi Pandey

Reg.No.22/Ph.D/W/026

Under the supervision of

Supervisor

Dr. Nandini Srivastava

Professor, SLM, Director, CDP

Manav Rachna International Institute of Research & Studies

Joint Supervisor

Dr. Vandana Gambhir

Assistant professor, Lakshmibai College

University of Delhi

Department of Management

School of Leadership & Management

Manav Rachna International Institute of Research & Studies Sector-43,

Surajkund–Delhi Road, Faridabad– 121004

SCHOOL OF LEADERSHIP & MANAGEMENT

Certificate

I hereby declare that the Short Synopsis titled "IMPACT OF COGNITIVE BIASES ON MANAGERIAL DECISION-MAKING STYLES IN ORGANIZATIONS" being submitted in partial fulfilment of the requirement for the degree of Doctor of Philosophy in the Department of Management under School of Leadership & Management of Manav Rachna International Institute of Research & Studies, Faridabad during the academic year 2023-24. It is a bona fide record of original work carried out under the supervision of Dr. Nandini Srivastava & Dr. Vandana Gambhir and has not been submitted in full or part to any other university or institute for degree or diploma. Further, it is certified that Short Synopsis is plagiarism free, and proof has been submitted.

7/9/2024

Aayushi Pandey

Reg.No.22/Ph.D/W/026

7/9/24

Signature of the Supervisor

Dr. Nandini Srivastava, Professor, School of Leadership & Management Director, CDP, Manav Rachna International Institute of Research & Studies, Faridabad

(Chairperson, DRC)

(Dean, SLM)

Signature of the Joint-Supervisor

Dr. Vanadan Gambhir, Assistant Professor, Lakshmibai College, University of Delhi

Abstract

Abstract:

Decision-Making process and thereby effective decision- making is a critical aspect of organizational success, yet it is often hindered by cognitive limitations and biases at every step of its process. Organizations are complex entities where decisions can have far-reaching consequences, however, the human mind is not a perfect decision-making machine. This study reviews and organizes the existent literature and finds the existent decision-making theories adapted in organizations in decision making with the cognitive limitation clasped with them and identifies the prevalent cognitive biases among managers, understand how these biases affect decision-making styles, and assess their impact on the managerial decisions. The hypotheses aim to provide a framework for testing relationships between cognitive biases, decision-making styles, potential moderating factors, and the efficacy of interventions, fostering a deeper understanding of their interplay within organizational decision-making processes. Additionally, it aims to explore potential mitigating strategies or interventions that could enhance decision-making effectiveness by minimizing the adverse effects of cognitive biases within organizational contexts. Exploring the intricate ways in which cognitive biases manifest and shape managerial decision-making styles is essential to develop targeted interventions that mitigate their adverse effects and enhance the quality and effectiveness of organizational decisions.

Conclusion: Delineating the objectives of the study aims to provide a comprehensive understanding of how cognitive biases affect managerial decision-making styles and suggest practical measures to ameliorate their influence, ultimately contributing to improved decision-making processes within organizational settings. By employing a robust methodology that combines quantitative and qualitative approaches while considering potential confounding factors, this study shall provide valuable insights into how cognitive biases influence managerial decision-making styles in organizational settings.

Keywords: *Cognitive bias, Decision-Making process Decision-Making style, Decision-Making theories, Organizational Decision-Making*

Table of Contents

	Certificate	i
	Abstract	ii
	Table of Contents	iii

S. No.	Contents	Page No.
1.	Description of Broad Area	1- 3
	a. Introduction to Decision -Making, Decision-Making Styles in Organizations	
	b. Role of Cognitive Biases	
2.	Literature Review	3-15
3.	Research Gaps	15-15
4.	Problem Statement	15-15
5.	Research Objectives	15 -16
6.	Research Methodology	16-16
7.	Expected Outcome of the Research	16-17
	References	18-22
	Similarity Verification Report	
	Grammarly Certificate	

DESCRIPTION OF BROAD AREA

Introduction to Decision-Making

Decision-Making is a fundamental process in organizations, shaping their success, adaptability, and long-term sustainability. The four pillars of managerial decision-making are self-awareness, knowledge, leadership, and wisdom. (Druker, P.F. ,1973). To accomplish organizational goals, managers and leaders must identify challenges, weigh their options, and select a course of action from among them through the crucial and necessary process of decision-making. (Weinrich and Koontz, 1980). It is a crucial component of management since decisions made during the decision-making process affect every action, operation, strategy, proposal, and plan inside an organization.

In the dynamic landscape of organizational decision-making, cognitive limitations significantly shape the quality and outcomes of choices. A collection of recurring mental errors that result from our imperfect capacity for impartial information processing is known as cognitive bias. It might lead to irrational and illogical decisions as well as lead to a misinterpretation of threats and hazards. A wide range of departures from what is typically seen as perfectly logical judgment and decision-making are included in cognitive biases in decision-making.

Decision making process and thereby the effective decision making is a critical aspect of organizational success, yet it is often hindered by cognitive limitations and biases at every step of its process. Organizations are complex entities where decisions can have far-reaching consequences however, the human mind is not a perfect decision-making machine. Cognitive limitations, such as information overload, time constraints, and bounded rationality, restrict the ability of individuals within organizations to make fully rational decisions. (David M. Allen, 2008); (Simon,1978) ;(Todd S. Breaver et al. ,2007). Understanding the mechanisms behind these biases is crucial. Decision making style or models refers to the habitual or preferred approach managers adopt when faced with making choices or solving problems. Five such decision-making styles with cognitive limitations are studied.

Neuroscience of Decision-Making

Neuroscientific research has made significant strides toward understanding the brain systems underlying decision-making processes. (Hare, Todd A., 2009) It describes the neural foundations of self-control and decision-making, shedding light on the critical role the brain's valuation system plays in choosing courses of action that balance short-term goals with long-term goals. The study's findings shed further light on the brain process underlying how emotions influence spatial decision-making, which can help people make better decisions and avoid emotional errors. (Zhao, Y., 2022) Cognitive biases are triggered by neural processes, and heuristics and biases in decision-making can have an impact on brains. (De Martino et al, 2006)

Organizational Decision-Making

Organizational decision making is the process by which one or more organizational units make decisions on the organization's behalf. The decision-making unit's size might vary, encompassing the full membership of the company or only one manager. Organizational decisions are often influenced by personal goals, yet they are nonetheless justified to other agencies and units as adhering to organizational standards. Decisions inside an organization are often made with the organization's objectives in mind rather than personal ones. (Mintzberg et. al, 1973)

Decisions made by individuals are based on their personal values, beliefs, and judgments about whether something is appropriate. In contrast, organizations make decisions based on a variety of stakeholders and values that are integrated into their decision-making process. Making decisions also involves cognitively weighing and selecting among choices to achieve several goals, hence the act of making decisions. A pattern of departure in judgment, or cognitive bias, would be when we draw erroneous conclusions about other individuals, situations, or both. (Cohen Et.al, 2014)

Decision-Making Styles

Decision-making styles influence the collection, sharing, and use of knowledge. A person's decision style is defined as how they obtain information to make decisions. Managers' decision-making style is determined by the quantitative and qualitative methods they use to organize and clarify complicated situations and weigh the implications of considering a wide range of options. Decisions that take longer than necessary are usually made with incomplete information, by the wrong people, or in the wrong department. These are not the best choices, and the results are not great. Effective teams typically produce better decisions when they are involved in the process of formulating and evaluating different methods to problem-solving. It is occasionally possible for time restrictions or minority domination to obstruct democratic decision-making.

The cognitive process of decision-making still considers a person's personality in relation to their wants, values, and self-concept. A person's perception and reaction to a decision-making process are typically reflected in their decision-making style. (Hodgkinson & Sadler-Smith, 2018) Managers' decision-making approach is influenced by their experience and learning curve. Individual differences in decision-making are dependent on two factors: (i) how information is used; and (ii) focus, or the quantity of solutions taken into consideration.

Three essential components make up the decision style framework: (i) an individual's problem-solving approach, (ii) their interpersonal communication style, and (iii) how they anticipate other people's actions to impact their performance. The operational definition of a decision-making style is a preferred method or habitual pattern that is constant across time and in various contexts.
There are five decision making styles.

(i) decisive, emphasizing efficiency, consistency, fast corrections, and the usage of little information.
(ii) flexible, adaptable, emphasizing the concept of numerous meanings and consequences.
(iii) hierarchic, emphasizing reciprocal trust, careful examination, high-quality production, and hierarchical relationships.
(iv) integrative, emphasizing the value of innovation and exploration—that is, applying several strategies to solve problems; and

(v) centred on collaboration, trust, and teamwork.

Role of Cognitive biases

Amos Tversky and Daniel Kahneman first introduced the idea of cognitive bias in 1972. While it may not be possible to completely eradicate the brain's inclination to use shortcuts, being conscious of biases may aid in improving decision-making. Because of the brain's inclination to simplify information processing by applying a filter of preferences and past experiences, cognitive bias is a methodical way of thinking. The filtering process is the brain's coping mechanism for processing and ranking large amounts of information fast. Even while the method is successful, its limitations may lead to thought errors. Basically, cognitive biases give mental shortcuts that help people navigate daily life, but they can also result in incorrect interpretations and conclusions. Cognitive biases are frequently caused by problems with memory, attention, and other mental processes. People might easily be impacted by these often-automatic decision-making processes without even being aware of it. Heuristics are a type of filtering process and coping mechanism that help absorb large volumes of information quickly.

LITERATURE REVIEW

Decision-Making in Organization

Determining what matters to a group of people or an organization is the process of making decisions. It entails choosing a course of action from two or more viable options to address a particular issue. Making decisions is arguably the most significant aspect of a manager's work. It is the most crucial phase of the planning process. Managers make several decisions when they plan, including the objectives their company will pursue, the

resources they will employ, and the personnel who will handle each crucial task. It is a cognitive process that leads to selecting one reasonable plan of action from a range of workable alternatives. It integrates the mental processes of action, perception, and conclusion regarding stimuli. Conversely, cognitive style refers to the arrangement or connection of thought processes and reaching a conclusion when faced with ambiguity and uncertainty. Every decision has a scope or time horizon. (Max H. Bazerman, 2006) "Making consistent, value-maximizing choices within specified organizational constraints" is the definition of rational decision making.
The primary factor that determines whether organizational management is successful or unsuccessful is the calibre and speed of decision-making. For decision-making to be of high quality, it is essential to establish goals, offer solutions to challenges, and weigh and balance interests and values. Risk analyses are required to differentiate between the alternatives. Significant problem for high-quality decision-making is determining how much managers employ both quantitative and qualitative criteria in their decision-making. However, to do these duties, the managers need to have certain abilities, including (i) boldness, (ii) reason, (iii) inventiveness, and (iv) judgment balance. These abilities affect the calibre of decisions made, which has advantageous consequences on the organizational effectiveness.

Making decisions is viewed as a process that involves selecting one option from among competing ones and putting the selected option into action. (Richard M.Cyert,James G.March, 1963) It involves selecting one option from a range of options to get the desired outcome. It is a cognitive process that logically results in the choice of one course of action from several feasible options. It integrates the mental processes of action, perception, and conclusion regarding stimuli. Conversely, cognitive style refers to the arrangement or connection of thought processes and reaching a conclusion when faced with ambiguity and uncertainty. Every decision has a scope or time horizon. "Making consistent, value-maximizing choices within specified organizational constraints" is the definition of rational decision making.

Variations in the organizational structure, managerial level, education, values, and attitudes of managers all have an impact on the decision-making process. There are other factors that contribute to the differences in decision-making between managers, including experience, analytical skills, information processing and perception abilities, scope of consultation, degree of choice freedom, availability of resources, and the rapport and trust that managers have with the employees they supervise. The skills that are believed to be essential for efficient and successful decision-making are based on the normative model of decision-making, which sets criteria for decision-making. Mancur Olson (1965)

Importance of understanding decision-making processes in organization

Making decisions is arguably the most significant aspect of a manager's job. It is the most crucial component of the planning process. When managers plan, they make decisions about a variety of things, including the objectives their company will pursue, the resources they will employ, and the personnel who will carry out each necessary activity. (Hastie et.al,2005) The efficacy of the plans that managers create is significantly impacted by the calibre of those judgments. The manager is responsible for determining the process's structure, task allocation, accountability, and connection types, as well as how these things are established. Making decisions is crucial to coordination to maintain unity of action. It will be responsible for determining how the standard will be formed, how deviations from the standard will be corrected, how the principles will be established, how instructions will be delivered, and so forth. Effective decision-making is essential for effective managerial performance. (Greenberg, 2011) Most profit-seeking companies' managers are constantly faced with making a wide range of crucial decisions regarding things like capital investments, dividend policy, personnel issues, cost control, advertising, and pricing. Like this, managers of public companies and non-profit organizations must make critical decisions on a variety of crucial issues. Decision-making is another factor used to classify someone as being in management or not. He is a member of the management team if he makes decisions. George Terry once said, "Decision-making is the one universal mark of a manager."

Decision theories with cognitive limitations

Prospect Theory: According to prospect theory, investors place varying values on profits and losses. To understand, if an investor had to choose between two investment choices, he or she will choose the one with the potential for profit rather than the one based on probable losses. The psychology and economics communities have mostly commended prospect theory despite its shortcomings, believing it to be a more realistic account of human decision-making than expected utility theory. Even the most enthusiastic supporters of rational choice theory are persuaded to accept the validity of the brain correlates of some fundamental behavioural phenomena, such as probability weighting distortions, loss aversion, and framing effects, which form the foundation of prospect theory. (A. Tversky & D. Kahneman, 1979)

Dual process Theory: Jonathan St. B.T. Evans suggested the theory in 1979. For many years, Tversky and Kahneman studied how individuals think and make decisions. As a result, they developed a dual processing model, which seeks to characterize the two systems, known as system one and system two, that people use to process information. The information processing system might influence how we make decisions. Human cognition is governed by two systems, according to Daniel Kahneman: system 1 controls rapid, intuitive, and effortless

thinking, whereas system 2 controls slower, more analytical thinking that requires more mental effort. It is thought that most of our daily activities are managed by System 1. Evans, Jonathan St.B.T., and Stanovich, Keith E. (2013)

Heuristics and biases Theory: Heuristics are mental quick cuts that make probability analysis and problem solving easier. These techniques lessen cognitive load by using generalizations or guidelines. While they can be helpful in making quick decisions, they usually result in erroneous or irrational conclusions. The degree to which the item or event is representative, prototype, or like the relevant class or process forms the basis of the assessment, the higher the degree of perceived representativeness or similarity, the higher the probability. Some judgmental biases highlight heuristics for uncertain reasoning. Beliefs are the basis for many decisions. Three categories of heuristics distinguished are availability, representativeness and anchoring & adjustment. The goal of each kind of heuristic is to lessen the mental strain needed to decide, but they occur in different contexts. (Tversky, A., & Kahneman, D., 1974)

Bounded Rationality Theory: The concept of "bounded rationality," proposed by American economist Herbert Simon, who was awarded the Nobel Prize in Economics. Simon claims that in addition to environmental influences, cognitive or mental limitations also affect how decisions are made. (Simon,1955). There are several reasons why human decision-making deviates from perfect economic rationality, including mental capability, time, and information availability. We refer to this as bounded rationality. Instead of trying to choose the "best" course of action, we usually choose choices that are only passably good. Simon coined the phrase "bounded rationality" to summarize his critique of neoclassical economics and his argument that a customized understanding of rationality should take the place of homo economicus's presumptions about perfect rationality tailored to cognitively limited agents. He is well-known for having contributed to the theory of bounded rationality, which holds that social and cognitive constraints (the challenge of gathering and analyzing all relevant information) prevent people from making completely rational decisions. According to Simon, rationality is the relationship of compliance (efficacy) between predetermined aims and how they can be achieved. Terms like "substantive" and "procedural" are used by Herbert Simon's bounded rationality theory to distinguish between different theories of reasonable human action. This means that an agent is reasonable if they know exactly what they want to achieve and won't settle for anything less.

Cognitive Load Theory: In the late 1980s, the cognitive load theory was developed because of research conducted by John Sweller and colleagues. According to John Sweller's 1988 introduction of the Cognitive Load Theory (CLT), instructional tactics should avoid overloading working memory, which can only hold a limited amount of information at once, to maximize learning (Sweller, 1988). The hypothesis is based on human cognitive architecture, or our comprehension of the structure and functions of the human mind. Humans have a cognitive

architecture that allows us to understand how people think, learn, and solve problems. This natural information processing system devises several strategies to reduce cognitive burden and expedite the acquisition of biologically secondary knowledge that is retained in long-term memory. Two presumptions underlie cognitive load theory (Sweller, 2006). First, working memory and long-term memory are the two components of human cognition. Long-term memory has an infinite capacity, but the working memory has a limited one.

Predictably Irrational Decision-Making: Our actions aren't arbitrary, in Ariely's opinion. We are expected to be illogical since they are methodical and predictable. Identifying the trends and knowing why we behave irrationally on a regular basis helps us make better decisions. Dan Ariely's book Predictably Irrational investigates our cognitive biases, decision-making processes, and the influence of emotions on our decisions. It also discusses how we make irrational decisions in various scenarios. Dan contends that although we believe we oversee the decisions we make, in many cases those decisions are made for us in ways we are unaware of. Choice architecture is the term for this concept. The concept of choice architecture holds that our surroundings influence the choices we make. Ariely makes the argument that we are biased toward making decisions using study findings and visual examples. He argues that people are frequently predisposed to make decisions when options are presented. (Dan Ariely,2008)

Cognitive Biases in Decision-Making

Cognitive bias is real. Despite our best efforts to avoid it, we are all susceptible to becoming prey. Furthermore, cognitive, and organizational bias impedes the ability to make sound decisions, whether you're deciding what to eat for lunch or whether to submit a bid to purchase a rival business.

Definition and types of cognitive biases

Kahneman presents the results of decades worth of study on cognitive biases in an approachable way. He explores the ways in which these biases impact individual and organizational decision-making.

Although eliminating the brain's propensity to take shortcuts might not be feasible, being aware of biases might help make decisions better. Cognitive biases are deeply rooted cognitive tendencies or dispositions in human cognition and reasoning that often contradict logic, plausibility, and probability reasoning. Cognitive biases are generally understood to be systematic, universal inclinations, dispositions, or tendencies that skew or distort information processes in ways that result in inaccurate, poor, or completely incorrect outcomes.
(Lightenstein and Slovic, 1971).

Cognitive biases prevalent in Organizations

Over the course of the last few years, researchers in the fields of cognitive psychology, social psychology, and behavioural economics have found a growing list of cognitive biases related to human judgment and decision-making. (Busenitz et .al , 1997) Common and predominantly studied biases in context of organizations include Actor-observer bias, anchoring bias , availability heuristic , bandwagon effect, bias blind spot ,clustering illusion, confirmation bias, the Dunning-Kruger effect, Group think, Sunk cost fallacy , Overconfidence bias and Framing effect (Tversky, A., & Kahneman, D., 1974)

Mechanism behind the cognitive biases in Decision-Making in organizations

Making more accurate decisions may be facilitated by having a deeper comprehension of the variables that influence preferences and choices. Numerous research has studied how cognitive biases affect judgment and how they relate to thinking styles and cognitive capacities. Research on cognitive bias has not looked at how individual differences in human values relate to it, in contrast to studies on behaviour, attitude, personality, and health concerns and how they relate to human values. (Blumenthal-Barby and Krieger, 2015)

Influence of cognitive biases on managerial decision-making and role of heuristics and biases in shaping managerial choices

It might lead to irrational and illogical decisions as well as lead to a misinterpretation of threats and hazards. The propensity to act or make decisions erratically is known as cognitive bias, and the researchers clarified that it is brought on by our values, memories, socialization, and other individual characteristics (Baron, 2000)

Due to rapid, automatic System 1 thinking, which evaluates every scenario and attempts to infer patterns from past experiences, cognitive and decision-making biases arise. As such, these shortcuts are useful resources for negotiating the intricate social and cognitive terrain. (Kahneman, 2011) When considered collectively, they shed light on the distinctions between automatic, heuristic-based processing and conscious, deliberate cognition when it comes to judgment and decision making. Given that cognitive bias frequently occurs unconsciously, it is simpler for someone to identify prejudice in another person than in themselves. An individual should exercise caution while acquiring any new unconscious cognitive biases, even if they are rational, objective, and capable of appropriately assessing their environment. (Gilovich, T., Griffin, D., & Kahneman, D. (Eds.). 2002).

Decision making styles with cognitive biases

Decision-making styles are approaches used to make choices and decisions. These styles reflect a combination of cognitive processes, personal preferences, and behavioural tendencies. Rational decision-making style and analytical style are ones where decisions are made through systematic analysis and rational evaluation which offers benefits of structured analytical approaches in complex and data driven scenarios (Simon, H.A.,1979); (Hammond, K.R. et al., 2006) while cognitive decision-making styles are one way to categorize these approaches, decision-making styles can also be classified into more general categories based on approach adopted to decide.
Various decision-making styles with cognitive biases have been studied. Research papers and scholarly works reviewed to organise the findings which highlights majorly ten types of cognitive decision-making styles namely directive, deliberative, behavioural, adaptive, heuristic, intuitive, dependent, avoidant, spontaneous and emotional which are among the documented and conversant decision-making styles in organizations.
Directive decision-making style which is quick decision-making, often with a focus on efficiency and results, may involve limited information processing. S. Alexander Haslam S. and others through their work delve into the psychological aspects of leadership, discussing directive decision-making and its influence on group dynamics.

Deliberative decision-making style involves conscious, effortful consideration of information and alternatives, often considering multiple perspectives before reaching a conclusion. (Strack, F., & Deutsch, R., 2004); (Epstein, S., 1994).

i. *Behavioural decision-making style* considers how decisions impact people, focusing on collaboration and consensus-building rather than purely rational analysis. (Scott Plous, 1993); (Michelle Baddeley, 2017)

ii. *Adaptive decision-making style* adapts cognitive processes based on environmental cues, learning from feedback and experiences (Fiske, S. T., & Taylor, S. E.,2013) ;(Arkes, H. R., & Hammond, K. R.,1986)

iii. *Heuristics decision-making style* involves using mental shortcuts or rules of thumb (heuristics) to simplify decision-making processes, leading to efficient but sometimes biased judgments. (Tversky, A., & Kahneman, D. (1974); (Gigerenzer, G., & Gaissmaier, W. ,2011)

iv. *Intuitive Decision-Making Style* refers to a cognitive and behavioural approach to decision making those banks on gut feelings, instincts, emotions, and immediate reactions based on past experiences. (Malcolm Gladwell, 2005). Decisions made are quick and often without extensive analysis or conscious reasoning. It trusts on intuition and the subconscious information gathered over time. (M.D.R. Evans and Jonathan

St. B.T. Evans, 2004) Intuition plays a valuable role in decision making, including expert decision making. (Dane & Pratt, 2007)

v. *Dependent Decision-Making Style is* a cognitive and behavioural approach in decision making that is categorised by a strong reliance on others for guidance, support, and input seeking validation and reassurance from others. It struggles with situations that require them to be self-reliant, autonomous, or self-sufficient.

vi. *Avoidant Decision-Making Style* is pattern of behaviour in which individuals tend to avoid making decisions or confronting choices, especially when faced with difficult, emotionally charged, or anxiety-inducing situations. (Joseph Ferrari, 1995) This style is often characterized by procrastination, indecisiveness, and a strong desire to minimize or escape the discomfort associated with decision-making. (Timothy A. Pychyl, 2013) Several Psychological factors like fear of negative outcomes, perfectionism, low self-confidence & rumination, emotional avoidance and avoiding responsibility contribute to decision avoidance and its implications. Cognitive biases, such as the status quo bias and confirmation bias, can influence decision avoidance by reinforcing existing beliefs or the preference for the current situation (Steel et al., 2015)

vii. *Spontaneous Decision-Making Style* refers to making choices and decisions without extensive planning, analysis, or deliberate thought. It is characterized by a rapid and often intuitive approach to decision-making, where individuals rely on their instincts, emotions, and immediate reactions rather than engaging in thorough deliberation. (Nassim Nicholas Taleb 2007 & 2012).

viii. *Emotional Decision-Making Style,* also known as affective decision-making, refers to a way of decision making that is heavily influenced by emotions and feelings when evaluating options and selecting a course of action. Here, emotional factors influencing personal and interpersonal decisions and their impact. (Damasio, 1994)

Effects of biases on strategic decision-making

Depending on the kind of decision-making process used, the assessment of strategic possibilities may have an impact on strategic decisions. (Amason, 1996; Audia et al., 2000; Baum and Wally, 2003; Eisenhardt, 1989; Schwenk, 1984; Dean and Sharfman, 1996). Strategic decisions are defined as the allocation of required resources

and competencies to achieve strategic goals, influence organizational structure and direction, and shape "the course of a firm." Chandler (1962) and Shrivastava and Grant (1985) follow Simon's (1993) definition of a decision as "a complex social process generally extending over a considerable period of time" (Eisenhardt and Zbaracki, 1992). Top level management teams usually make strategic decisions in response to emerging concerns, complex problems, or emerging trends, and they usually commit to long-term planning. (Shrivastava and Grant, 1985). These choices necessitate either proactive or reactive strategy development. To make decisions, the appropriate performers must first collect and assess the necessary data (Calabretta et al., 2017). This analysis needs to be performed using both reason and intuition. This implies that heuristics, cognitive biases, interpersonal dynamics, and factors related to diversity, or demographics can all influence how decisions are made. An additional challenge for decision-makers is the need for process efficacy to guarantee that decisions are effectively incorporated into strategy, especially in rapidly evolving markets. Eisenhardt (1999) asserts that to enhance their ability to identify patterns and obstacles, foster conflict, and swift resolution, hone their strategic thinking, keep a constant pace throughout the process, and impart appropriate and timely behaviour, decision-makers must cultivate collective intuition.
In the end, during a time of transitions like digitalization, which generate a vast amount of information, managers must pay particular attention to the collection and selection of data to make the best strategic decisions. For these reasons, we investigate and understand how choice biases affect the function of strategic decisions; additionally, we focus on the phased transition scenario, where the evaluation of strategic decisions becomes more complex.

Importance of acknowledging and addressing biases in managerial decisions

Bias awareness can help make better, more objective, and well-informed decisions if time taken to think about whether your choice is influenced by biases like confirmation bias, which is the tendency to look for evidence to support preexisting ideas. Some cognitive and psychological factors interact during the decision-making process. Neoclassical theories address these processes's rational responses. However, decisions cannot be made rationally, as the mind suggests, in a situation where there is no information available or if uncertainty replaces risk. Firm managers must make a lot of judgments in this direction while facing uncertainty. As a result, managers deploy bias, a term for several simple and useful quick cuts, for a range of goals. Making managers more aware of these biases has been shown to have benefits, including assisting them in giving themselves a realistic self-evaluation, giving events more weight when making judgments, enabling them to make logical conclusions more quickly, and opening their minds to new ideas. Additionally, managers are better able to make judgments when they combine this awareness with their emotional competencies. Decision making & problem solving is crucial in organizations. (HenryP.Sims Jr., 1992)

According to decision-makers in the business sector gain from methods that will assist them, and the effectiveness of the decision-making process depends heavily on their limited capacities. In the context of prospect theory, Tversky and Kahneman (1979) conceived that decision-makers were impacted by a variety of psychological biases and were unable to make rational decisions when they were in danger. Prejudicial judgment of a situation or item (person or object) is called bias. Although it is intrinsically subjective, it contains systemic flaws because of numerous people's judgments that diverge from the sensible course of action. According to Aren (2019), biases are shortcuts that people take because of the demands of their daily lives. Shortcuts are useful for making rapid decisions. It's not necessary for a shortcut to be completely incorrect. It is also evident in professionals and seasoned individuals (Tversky and Kahneman, 1974), and when paired with experience, it is highly helpful in making decisions on intricate and challenging problems.

Mitigation & Overcoming biases.

To mitigate the risk of cognitive bias and related forms of bias, it is recommended that companies verify the completeness of the data utilized for training machine learning models. Decision-makers should assess when it is suitable or improper to utilize machine learning technology, and data scientists creating the algorithms should arrange data samples in a way that reduces algorithmic and other forms of machine learning bias. Human-related data should be reflective of the various racial and gender identities, backgrounds, and cultures that may be negatively impacted. Machine learning bias can be prevented primarily through two methods: excellent governance and raising awareness. To reduce biases, few measures could be taken like Choosing training data that is appropriate; monitoring the system with performance and testing & validating systems to make sure bias does not show up in the results

Organizations may not be able to eliminate bias, but they can reduce it using both automated and human action. However, not all bias is harmful by nature. For instance, the method an algorithm employs to choose how to arrange and classify data is known as algorithmic bias. Making sure the bias makes sense for the work at hand and isn't intrinsically destructive is crucial.

A review of the research on cognitive bias mitigation techniques in organizational decision-making reveals several important conclusions that provide useful guidance for improving the efficacy of decision-making. To begin with, efforts promoting diversity and inclusion are particularly noteworthy as essential tactics for reducing cognitive biases. Diverse teams are more able to resist groupthink, consider other viewpoints, and promote critical thinking,

which helps lessen the influence of biases like availability and confirmation bias (Milliken & Martins, 1996; Cox, 1994).

Second, by offering organized frameworks for assessing choices, spotting potential biases, and promoting accountability, decision review procedures are essential to the mitigation of prejudice. Decision-makers can identify and correct biases including anchoring bias and overconfidence bias with the use of these processes, which promote transparency, thoroughness, and constructive feedback (Schwenk, 1984; Eden & Ackermann, 1998). Initiatives in the areas of education and training are also crucial in ensuring that people have the information and abilities necessary to identify and successfully combat cognitive biases.

These programs mitigate biases including framing effects and escalation of commitment by empowering decision-makers to make better informed and objective judgments through the provision of practical solutions, critical thinking, and raising awareness (Bazerman & Moore, 2008; Kahneman, 2011). The utilization of Decision Support Tools (DSTs) might be beneficial in reducing cognitive biases as they offer objective analysis, analytical capabilities, and organized frameworks. These methods lessen the impact of cognitive biases by empowering decision-makers to make more informed, logical, and evidence-based choices. Sharda and associates (2014); Power (2002)

RESEARCH GAP

There is gap found with less work on Comparative analysis on decision-making styles and the influence of cognitive biases across different industries, organizational sizes, or cultural contexts to identify variations and factors contributing to such differences. Research to be more effective on to investigate the effectiveness of intervention strategies designed to mitigate the impact of cognitive biases on decision-making and to explore how technology, artificial intelligence, and data-driven tools impact managerial decision-making styles and whether they exacerbate or mitigate cognitive biases. Research work still needs to be done to integrate neuroscience methods to study the neural processes associated with cognitive biases and decision-making styles among managers and studying the impact of emerging technologies, such as blockchain, machine learning, or decentralized decision-making platforms, on cognitive biases and decision-making styles in organizations. This interdisciplinary approach could provide a deeper understanding of the underlying mechanisms.

Problem Statement

To comprehensively investigate the influence of cognitive biases on various managerial decision-making styles within organizational settings, aiming to elucidate the intricate relationships between different biases and decision-making approaches.

Research Objectives

1. Evaluate Managerial Decision-Making Styles employed by managers, considering rational, intuitive, dependent, avoidant, and spontaneous approaches.
2. Examine the Relationship between Cognitive Biases and Decision-Making Styles adopted by managers.
3. Propose Mitigating Strategies and recommend targeted interventions to mitigate the negative impact of cognitive biases on managerial decision-making, aiming to enhance decision quality and outcomes within organizations.

RESEARCH METHODOLGY

Study will be conducted at a single point in time (cross-sectional) on representative sample through random convenient sampling method on sample size of 120 managers from various industries or sectors. Data collection shall be done through surveys or questionnaires online /offline using reliable and valid instruments & scales.

Tools for Data Collection:

Cognitive Biases

4 cognitive biases have been identified for the study which are the prevalent ones in management in organizations. The four cognitive biases that shall be measured through data collection are Availability Bias, Framing Effect, Overconfidence Bias & Sunk Cost fallacy adapted with reference to Berthet 2021 , Parker & Fischoff Test 2005 & SCE-8 Test after Pilot study done with the questionnaire with a considerable sample size for reliable and valid results.

Decision-Making style

General decision-making style (GDMS) scale to measure decision-making styles shall be used.

Decision- Making Style-GDMS Scale by Scott & Bruce ,1995 -(25 Items) -5 Decision Making Styles on a 5 Point Likert Scale using 5-point ratings (1 = strongly disagree to 5 = strongly agree)5 Subscales are- Rational, Intuitive, Dependent, Avoidant & Spontaneous.

EXPECTED OUTCOMES OF THE RESEARCH

1. **Understanding decision-making dynamics:** Cognitive biases significantly influence how managers perceive information, assess risks, and make decisions. Exploring these biases helps unravel the underlying mechanisms driving managerial decision-making styles.
2. **Enhancing decision quality:** Recognizing and mitigating cognitive biases can potentially lead to better decision outcomes. By understanding how biases affect decision-making styles, organizations can strive for more effective and rational choices.
3. **Improving organizational performance:** Poor decision-making due to cognitive biases can have detrimental effects on an organization's performance. Identifying and addressing these biases can contribute to improved strategic planning and overall success.
4. **Developing targeted interventions:** Research in this area allows for the development of interventions and strategies to reduce the impact of biases. These interventions could include training programs, decision-making frameworks, or structural changes within organizations.
5. **Advancing managerial practices:** Insights into how cognitive biases affect managerial decision-making can inform best practices in leadership and management. This knowledge can guide managers in adopting more effective decision-making approaches.
6. **Contributing to academic and practical knowledge:** Research in this field adds to academic literature, fostering a deeper understanding of the intersection between psychology, behavioral economics, and management. Additionally, it offers practical insights that organizations can implement to improve decision-making processes.

REFERENCES

- Amos Tversky and Daniel Kahneman ,1974, Judgement under Uncertainty: Heuristics and Biases, Science
- Arkes, Hal R., and Catherine Blumer, 1985, The Psychology of Sunk cost
- Daniel Kahneman and Amos Tversky,1979, Anchoring -and-adjustment in probability judgements: A dual Processes approach, Psychological Review
- Amos Tversky and Daniel Kahneman, 1983, The representativeness heuristic and the conjunction fallacy, Psychological Review
- Arkes, H. R., & Blumer, C.,1985, The psychology of sunk cost. Organizational Behaviour and Human Decision Processes, 35(1), 124-140
- Arkes, H. R., & Hammond, K. R.,1986, Judgment and decision making: An interdisciplinary reader. Cambridge University Press
- Asch, S. E. ,1955 Opinions and social pressure. Scientific American, 193(5), 31-35
- Amir Grinstein and Isaac Meilijson, 2005, Coping with Information Overload in decision making: Use of Heuristics, Journal of Organizational Behaviour and Human Decision Processes,
- Bazerman, M. H., & Moore, D. A.,2009, Judgment in Managerial Decision making
- Blumenthal-Barby and Krieger, 2015, The impact of Cognitive biases on Professional's Decision -making: A Review of Four Occupational areas, Frontiers
- Brown, K. G., & Leigh, T. W. ,1996, A New Look at Psychological Climate and Its Relationship to Job Involvement, Effort, and Performance
- Brenner et al., 1996; Overconfidence in Probability and Frequency Judgements: A Critical Examination
- Busenitz et .al, 1997, Cognitive Biases in Strategic Decision Making: Implications for Entrepreneurship, Entrepreneurship Theory, and practice.
- Cohen et.al, 2014, The Garbage Can model of Organizational choice: Looking Forward at forty, Research in organizational behaviour.

- Cowan, N. ,2001, The magical number 4 in short-term memory: A reconsideration of mental storage capacity.
- Cyert and James G. March,1972, Bounded Rationality, Ambiguity, and the Engineering of Choice. The Bell Journal of Economics and Management Science
- Dan Ariely ,2008 Predictably Irrational: The Hidden Forces That Shape Our Decisions
- David J. Snowden and Mary E. Boone, 2007, The Influence of cognitive limitations on strategic planning and decision-making, Strategic Management Journal
- David M. Allen, Psychiatric Times, 2008, Information overload: causes, symptoms, and solutions
- Donald A. Saucier et al., 2017, Cognitive Control, attentional bias and emotion regulation in probationers who have offended violently, Cognitive Therapy and Research
- Edmondson, A. C. ,1999, Psychological Safety and Learning Behaviour in Work Teams.
- George Loewenstein et al. 2001; Hot-cold empathy gaps and medical decision making.
- Irving L. Janis, 1982; Groupthink: Psychological Studies of Policy Decisions and Fiascoes.
- Janis, I. L.,1972 Victims of Groupthink
- Epstein, S. ,1994 Integration of the cognitive and the psychodynamic unconscious. American Psychologist, 49(8), 709-72
- Fiske, S. T., & Taylor, S. E., 2013, Social Cognition: From Brains to Culture. SAGE Publications
- Gardener, G., & Gaissmaier, W. ,2011, Heuristic decision making. Annual Review of Psychology, 62, 451-482
- Gary A. Klein, IEEE Transactions on Systems, Man, and Cybernetics, 1989, Information Processing and Decision making in complex Environments.
- George A. Miller, Psychological Review, 1956, The magical number Seven, plus or minus two: Some limits on our capacity for processing information.
- Greenberg,2011 Decision Making in organizations, Emeral Insight
- Hammond, K. R., et al., 2006, The Essential Guide to Judgment and Decision Making. Wiley-Blackwell
- Hastie et.al,2005, The Rationality of Group Decision Making, Group processes & Intergroup relations.

- Henry P. Sims Jr., 1992, Decision Making and problem Solving: Decisions that impact Organizations, Journal of Management
- Herbert A. Simon, Nobel Prize Lecture, 1978, Bounded Rationality in decision-making
- Hodgkinson & Sadler-Smith, 2018 A strategic Management Process: The Role of Decision-Making styles and organizational performance, Emerald Insight
- Holger Hoffmann and Norbert Schwarz (Psychology of Aesthetics, Creativity, and the Arts, 2014), The availability Heuristic in retrospective Cue based Judgements: A Research Review and Meta-analysis.
- J. Richard Eiser, Cognitive Science, 1985, Cognitive limitations and concurrent performance
- Janis, I. L. (1972). Victims of Groupthink
- Jehn K. A., & Bezrukova, K., 2004. A Field Study of Group Diversity, Workgroup Context, and Performance.
- Jennifer S. Lerner et al., 2015, The Role of emotion in decision making: A cognitive neuroscience perspective, Current Directions in Psychological Science
- John S. Hammond, Ralph L. Keeney, and Howard Raiffa (Harvard Business Review, 1998) The hidden traps in decision-making.
- John Sweller, 2005 Cognitive Load Theory: Implications for Instructional Designers, Australian Journal of Educational Technology
- Jonathan St.B.T. Evans and Keith E. Stanovich, 2013 “Dual-Process Theories of Higher Cognition: Advancing the Debate”, Psychological Science.
- Kahneman, D 2003 "A perspective on judgement and choice"
- Kahneman, D., 2011, Thinking, Fast and Slow.
- Kristina L Guo , 2020; DECIDE: A Decision-Making Model for More Effective Decision Making by Health Care Managers.
- Lichtenstein, S., & Fischhoff, B., 1977, Do Those Who Know More Also Know More About How Much They Know?
- Michelle Baddeley, 2017; Behavioural Economics: a very short Introduction

- Mintzberg, henry, 1973 ,Organizational Decision Making as a political process: The case of a University Budget , Administrative Science
- Malcolm Gladwell, 2005; Blink: The Power of Thinking Without Thinking
- Mancur Olson, 1965, A Rational Theory of the size of Government
- Max H. Bazerman, 2006, Judgement in Managerial Decision Making, John Wiley & sons
- Nassim Nicholas Taleb, 2012, The Black Swan: The Impact of Highly Improbable 2007 and Antifragile: Things that gain from disorder
- Neal J. Roese and Kathleen D. Vohs; Hindsight Bias: A Meta-Analytic Review, Psychological Bulletin, Vol. 115, No. 3, 411-423, 1994
- Nickerson, R.S., 1998, Confirmation Bias: A Ubiquitous Phenomenon in Many Guises
- Richard M. Cyert, James G. March 1963 A Behavioural Theory of the Firm, Prentice Hall
- S. Alexander Haslam, Stephen D. Reicher, and Michael J. Platow; The New Psychology of leadership: Identity, Influence and Power
- Patrick W. Daly ,1974, Pattern recognition and decision making, Decision sciences
- Schein, E. H., 2010, Organizational Culture and Leadership
- Scott Plous, 1993; The psychology of judgement and decision making.
- Schwarz, N., & Bless, H., 1991, Happy and mindless, but sad and smart? The impact of affective states on analytic reasoning
- Simon, H. A. 1955, A Behavioural Model of Rational Choice, Quarterly Journal of Economics
- Simon, H. A. 1957, Models of Man, Social and Rational: Mathematical Essays on Rational Human Behaviour in a Social Setting
- Simon, H.A. 1979, Rational decision making in business organizations. The American Economic Review, 69(4), 493-513
- Strack, F. & Deutsch, R. ,2004, Reflective and impulsive determinants of social behaviour. Personality and Social Psychology Review, 8(3), 220-247
- Todd S. Braver et al. 2007, Psychological Review, The Psychology of Time pressure

- Tversky, A., & Kahneman, D.,1973, Availability: A Heuristic for Judging Frequency and Probability
- Tversky, A., & Kahneman, D., 1979, Prospect theory: An analysis of Decision under Risk.” Econometrica
- Wason, P.C.; Evans, J.St. B.T. (1974). "Dual processes in reasoning? "Cognition. 3 (2): 141–154.

MANAV RACHNA
vidyanatariksha

Dr. O.P. Bhalla Central Library
Manav Rachna International Institute of Research and Studies
(A deemed-to-be-university under section 3 of UGC Act 1956)

SIMILARITY VERIFICATION CERTIFICATE

Title: Impact of Cognitive Biases on Managerial Decision-making Styles in Organizations.

Researcher: Aayushi Pandey Registration Number: 22/PhD/W/026

Supervisor: Dr Nandini Srivastava Department: Of Management - PG SCM.

This is to certify that the above mentioned Short Synopsis/Thesis was scanned for similarity index through iThenticate Software on 3.9.24 ....with submission ID 3618:66077339 and the similarity index was found to be 8 %.The complete report running into 22 Pages, 7043 Word count with File Size 99.2 KB is being forwarded to the Research Supervisor/DRC/DRB for review.

Date: 4.9.24

Dr. Rajesh Kumar
University Librarian
Dr. O.P. Bhalla Central Library
Manav Rachna International
Institute of Research & Studies
Faridabad

The complete report of the above Short Synopsis/Thesis has been reviewed and the similarity index is below the accepted norms as per the University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations 2018. The Short Synopsis/Thesis may be considered for further processing

Research Scholar 7/9/2024

Research Supervisor 4/9/24 7/9/24

IMPACT OF COGNITIVE BIASES ON MANAGERIAL DECISION-MAKING STYLES IN ORGANIZATIONS

SHORT SYNOPSIS

by

Aayushi Pandey

Reg.No.22/Ph.D/W/026

Under the supervision of

Supervisor

Dr. Nandini Srivastava

Professor, SLM, Director, CDP

Manav Rachna International Institute of Research & Studies

Joint Supervisor

Dr. Vandana Gambhir

Assistant professor, Lakshmibai College

University of Delhi

MANAV RACHNA
vidyanatanksha

Department of Management

School of Leadership & Management

Manav Rachna International Institute of Research & Studies Sector-43,

Surajkund–Delhi Road, Faridabad– 121004

Abstract

Abstract:

Decision-Making process and thereby effective decision- making is a critical aspect of organizational success, yet it is often hindered by cognitive limitations and biases at every step of its process. Organizations are complex entities where decisions can have far-reaching consequences, however, the human mind is not a perfect decision-making machine. This study reviews and organizes the existent literature and finds the existent decision-making theories adapted in organizations in decision making with the cognitive limitation clasped with them and identifies the prevalent cognitive biases among managers, understand how these biases affect decision-making styles, and assess their impact on the managerial decisions. The hypotheses aim to provide a framework for testing relationships between cognitive biases, decision-making styles, potential moderating factors, and the efficacy of interventions, fostering a deeper understanding of their

iThenticate

Similarity Report ID: oid:3618:66077339

8% Overall Similarity

Top sources found in the following databases:

- 4% Internet database
- Crossref database
- 5% Submitted Works database
- 1% Publications database
- Crossref Posted Content database

Dr. Rajesh Kumar
University Librarian
Dr. O.P. Bhalla Central Library
Manav Rachna International
Institute of Research & Studies
Faridabad

Excluding matches
less than 14 words

TOP SOURCES

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	ispatguru.com Internet	2%
2	Colorado State University, Global Campus on 2022-08-05 Submitted works	<1%
3	Chiara Acciarini, Federica Brunetta, Paolo Boccardelli. "Cognitive biase... Crossref	<1%
4	Lebanese American University on 2022-05-10 Submitted works	<1%
5	Kaplan College on 2022-11-01 Submitted works	<1%
6	Southern New Hampshire University - Continuing Education on 2022-0... Submitted works	<1%
7	UNICAF on 2024-04-18 Submitted works	<1%
8	University of Witwatersrand on 2023-02-28 Submitted works	<1%

Sources overview

9	CTI Education Group on 2023-11-04 Submitted works	<1%
10	Colorado State University, Global Campus on 2023-01-01 Submitted works	<1%
11	University of Iowa on 2013-04-03 Submitted works	<1%
12	Manav Rachna International University on 2023-11-27 Submitted works	<1%
13	Manav Rachna International University on 2020-11-28 Submitted works	<1%
14	University Of Tasmania on 2024-01-01 Submitted works	<1%
15	9lib.net Internet	<1%
16	Swinburne University of Technology on 2022-05-29 Submitted works	<1%
17	sjdm.org Internet	<1%
18	my.chartered.college Internet	<1%
19	publications.tno.nl Internet	<1%
20	coursehero.com Internet	<1%

iThenticate

Similarity Report ID: oid:3618:66077339

PAPER NAME

IMPACT OF COGNITIVE BIASES ON MANAGERIAL DECISION-MAKING STYLES IN ORGANIZATIONS.docx

AUTHOR

Aayushi Pandey

WORD COUNT

7043 Words

CHARACTER COUNT

43434 Characters

PAGE COUNT

22 Pages

FILE SIZE

99.2KB

SUBMISSION DATE

Sep 3, 2024 3:25 PM GMT+5:30

REPORT DATE

Sep 3, 2024 3:25 PM GMT+5:30

8% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 4% Internet database
- Crossref database
- 5% Submitted Works database
- 1% Publications database
- Crossref Posted Content database

Excluded from Similarity Report

- Bibliographic material
- Small Matches (Less then 11 words)

Rajesh Kumar
Dr. Rajesh Kumar
University Librarian
Dr. O.P. Bhalla Central Library
Manav Rachna International
Institute of Research & Studies
Faridabad

Excluding matches
less than 14 words

Summary